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# STATION NOTES

CENTRAL STATES FOREST EXPERIMENT STATION

COLUMBUS 15, OHIO

No. 45



June 1948

## SHIPMAST VS. COMMON BLACK LOCUST IN SOUTHERN ILLINOIS

In March 1935, 1-year-old black locust stock was planted on a nearly level upland old field on the Shawnee National Forest in southern Illinois. One-half of the planting stock was from local seed, and the remainder from root cuttings of Long Island shipmast locust. Shipmast is a strain of black locust found on Long Island where it is characterized by superior stem form. The local seed was from the best natural stand of common black locust that could be found.

An examination of the planting area during March 1948 showed no important differences in form or growth between trees from the two sources. The summarized results given below are based upon three plots, each having 84 planted trees from each of the two sources.

	Shipmast locust	Common locust
Mean height, feet	31.4	30.7
Mean d.b.h., inches	3.7	3.6
Trees unforked below 16 feet, percent	44.6	42.3
Trees forked 2 feet or less from ground, percent	31.3	38.5
Survival, percent	73.0	60.7

A test of the effect of top-pruning at the time of planting on tree height, percent survival, and forming of the main stem showed no significant results for either shipmast or common locust. The data for both shipmast and common locust combined are summarized below.

	Top-pruned	Unpruned
Mean height, feet	31.6	30.7
Survival, percent	67.9	65.5
Trees unforked below 16 feet, percent	45.0	43.0

The growth and form of Long Island shipmast locust, when planted in the uplands of southern Illinois, is not superior to common black locust. The slightly better survival may or may not have been due to the strain. It could have been caused by the relative condition of the planting stock or by the different type of stock used; i.e., root-cutting stock vs. seedling stock.

Perhaps the most pertinent general conclusion is that superior strains of trees transported to places of greatly different climate and soil may not reproduce their desirable characteristics. Probably the most desirable way to obtain better trees is to use the best native stock as a base, and through selection and hybridization develop a superior strain adapted to the local climate and soil.

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